

Proposal Title: Biological Evaluation of Suisun Marsh Diversions  
 Applicant Name: Dan Odenweller  
 Mailing Address: 4001 N. Wilson Way, Stockton, CA 95205  
 Telephone: (209) 948-7800  
 Fax: (209) 946-6355  
 Email: dodenwel@hq.dfg.ca.gov

Amount of funding requested: \$ 464,000 for 3 years

Indicate the Topic for which you are applying (check only one box).

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Fish Passage/Fish Screens | <input type="checkbox"/> Introduced Species       |
| <input type="checkbox"/> Habitat Restoration                  | <input type="checkbox"/> Fish Management/Hatchery |
| <input type="checkbox"/> Local Watershed Stewardship          | <input type="checkbox"/> Environmental Education  |
| <input type="checkbox"/> Water Quality                        |   |

Does the proposal address a specified Focused Action? ☒ Yes ☐ No

What county or counties is the project located in? Solano County

Indicate the geographic area of your proposal (check only one box):

- |   |   |
|---|---|
| <input type="checkbox"/> Sacramento River Mainstem  | <input type="checkbox"/> East Side Trib: _____                  |
| <input type="checkbox"/> Sacramento Trib: _____     | <input checked="" type="checkbox"/> Suisun Marsh and Bay        |
| <input type="checkbox"/> San Joaquin River Mainstem | <input type="checkbox"/> North Bay/South Bay: _____             |
| <input type="checkbox"/> San Joaquin Trib: _____    | <input type="checkbox"/> Landscape (entire Bay-Delta watershed) |
| <input type="checkbox"/> Delta: _____               | <input type="checkbox"/> Other: _____                           |

Indicate the primary species which the proposal addresses (check all that apply):

- |  |   |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | <input checked="" type="checkbox"/> Spring-run chinook salmon |
| <input checked="" type="checkbox"/> Winter-run chinook salmon                                | <input type="checkbox"/> Fall-run chinook salmon              |
| <input type="checkbox"/> Late-fall run chinook salmon  | <input checked="" type="checkbox"/> Longfin smelt             |
| <input checked="" type="checkbox"/> Delta smelt  | <input checked="" type="checkbox"/> Steelhead trout           |
| <input checked="" type="checkbox"/> Splittail  | <input checked="" type="checkbox"/> Striped bass              |
| <input checked="" type="checkbox"/> Green sturgeon   | <input type="checkbox"/> All chinook species                  |
| <input type="checkbox"/> Migratory birds   | <input checked="" type="checkbox"/> All anadromous salmonids  |
| <input type="checkbox"/> Other: _____  |   |

Specify the ERP strategic objective and target(s) that the project addresses.

Include page numbers from January 1999 version of ERP Volume I and II:

Reduction of fish entrainment associated with water diversions, (ERP Vol. I, pg. 419)  
through fish screens (ERP Vol. I, pg. 428). Screening of small diversions in Suisun Marsh  
recommended (ERP Vol. I, pg. 429, ERP Vol. II, pg. 135). Developing a science-based  
evaluation process to prioritize screening diversions (ERP Vol. I, pg. 438).

Indicate the type of applicant (check only one box):

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> State agency         | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit     |
| <input type="checkbox"/> Local government/district       | <input type="checkbox"/> Private party  |
| <input type="checkbox"/> University                      | <input type="checkbox"/> Other: _____   |

Indicate the type of project (check only one box):

- |  |   |
|--|---|
| <input type="checkbox"/> Planning            | <input type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring          | <input type="checkbox"/> Education      |
| <input checked="" type="checkbox"/> Research |   |

By signing below, the applicant declares the following:

1. The truthfulness of all representations in their proposal;
2. The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
3. The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and Waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Dan Odenweller

Printed name of applicant



Signature of applicant

# **Biological Evaluation of Suisun Marsh Diversions**

## **Proposal Prepared for:**

February 1999 Proposal Solicitation Package  
CALFED Bay-Delta Program  
Ecosystem Restoration Projects and Programs

## **Submitted by:**

Dan Odenweller, Senior Biologist Supervisor  
California Department of Fish and Game  
Bay-Delta and Special Water Projects Division  
4001 N. Wilson Way  
Stockton, California 95205  
Phone: (209) 948-7800  
Fax: (209) 946-6355  
E-mail: [dodenwel@hq.dfg.ca.gov](mailto:dodenwel@hq.dfg.ca.gov)

Type of Organization: State Agency  
Tax Status: Not Applicable

Tax Identification Number  
and/or Contractor License: Not Applicable

## **Participants/Collaborators:**

Suisun Resource Conservation District  
2544 Grizzly Island Road  
Suisun, CA 94585  
Phone: (707) 425-9302  
Fax: (707) 425-4402  
E-mail: [Srkd@castles.com](mailto:Srkd@castles.com)

## EXECUTIVE SUMMARY

**Title:** **Biological Evaluation of Suisun Marsh Diversions**

**Applicant:** Dan Odenweller  
California Department of Fish and Game  
Bay-Delta and Special Water Projects Division  
4001 N. Wilson Way  
Stockton, California 95205  
Phone: (209) 948-7800  
Fax: (209) 946-6355  
E-mail: dodenwel@hq.dfg.ca.gov

### **Project Description and Primary Biological/Ecological Objectives**

The Department of Fish and Game (DFG) and the Suisun Resource Conservation District (SRCD) request funds to conduct an entrainment study involving unscreened diversions in Suisun Marsh. DFG staff would use fyke nets with live boxes to collect entrained fish from the unscreened diversions during normal water operations. Diversion sampling would use the field procedures employed by the Suisun Marsh Diversion Monitoring Program which monitored fish entrainment from 1996 through 1998 (CDFG, 1998). The fish entrainment information would be supplemented by sampling the nearby water channels. SRCD staff would promote and secure landowner participation, obtain access permits to suitable diversion sites, and help DFG staff with field collection. A minimum of five representative unscreened diversion sites will be sampled during September through May starting in the Fall of 2000. Fish sampling would occur through the Spring of 2002.

Data will be analyzed to determine the occurrence and frequency of fish species entrained from unscreened diversions. Species and size composition of fish caught from the channel samples will be compared with fish collected from the fyke net samples. The numbers of listed species found in the fyke collections will be determined and the numbers caught from the nearby channels will be estimated.

The primary objectives of the project are to 1) determine the number and species of fish entrained from unscreened Suisun Marsh diversions during the normal diversion season, 2) determine the fish community in the nearby channels during the same period, 3) compare the fish species composition and occurrence of listed species in both collection groups, 4) evaluate the need for fish screens or operational management actions to improve fish protection, and 5) provide recommendations for future use of fish screens in Suisun Marsh.

### **Project Tasks and Schedule**

DFG will consult with SRCD staff and other agency specialists, develop a Project Work Plan, and start initial preparations in Spring 2000 pending contract funding. SRCD will contact landowners, obtain access permits to suitable unscreened diversions, and provide coordination between landowners and the field crews starting in May 2000. Coordination will continue through the duration of the field monitoring components. Starting in July 2000, DFG staff will prepare equipment and personnel before the start of each sampling period. Starting in the fall of 2000 through the spring of 2002, DFG and SRCD staff will collect fish entrained from unscreened

diversions and from nearby channels during four normal water intake seasons. Concurrent with the monitoring seasons, DFG will key enter field data and perform routine QA/QC tasks to ensure data accuracy. Data analysis of the fish collection data will begin in the winter of 2001 with a final project report submitted by September 2002. Project management will be performed by DFG and SRCD throughout the project period (Winter 2000 through Fall 2002).

#### **Project Justification**

The 1999 CALFED Proposal Solicitation Package acknowledges that in the Suisun Marsh there is a conflict between protecting listed fish species from entrainment and providing water for managed wetland. There are also uncertainties about the relative biological benefits of screens in this location relative to others. CALFED has not funded new screening projects in Suisun Marsh due to these uncertainties and is currently requesting a study to determine the relative biological impacts of unscreened diversions (CALFED 1999a).

#### **Budget Costs and Study Impacts**

DFG and SRCD request \$464,000 over a three-year period. DFG will subcontract with SRCD for \$36,060 for their obligation. SRCD will cover SRCD project administrative costs and DFG will ask DWR and USBR for cost sharing. No adverse or third party impacts have been identified.

#### **Applicant Qualifications**

The DFG Fish Facilities Research Unit has been conducting applied bioengineering research on fish screening, passage, and agricultural/municipal/SWP/CVP diversions for more than 25 years. The Unit is part of the Fish Facilities Program of the Central Valley Bay-Delta Branch that has conducted applied research in the S.F. Bay Estuary for more than 35 years. DFG staff participants include a senior project manager, a research investigator, a field biologist, and two experienced fishery technicians. The SRCD executive director who previously worked four years as the District Biologist has extensive experience successfully implementing scientific studies, carried out several wetland restoration and enhancement projects, and conducted successful landowner coordination for past cooperative studies with DFG in the Suisun Marsh.

#### **Monitoring and Data Evaluation**

Qualitative and quantitative evaluation of the project objectives will be accomplished through the publication of quarterly status reports and by their distribution to the Central Valley Fish Facilities Review Team, the CALFED contract manager, and other designated representatives for peer review. If required, a Biological Monitoring Plan or its equivalent will be prepared and submitted to CALFED before the start of the field work. A final project report will be prepared and submitted upon completion of all the project tasks.

#### **Coordination with Other Programs/Compatibility with CALFED Objectives**

DFG staff has begun contacting the appropriate public agency representatives about preparation of this proposal (e.g., DFG Water Project Planning and Evaluation Section, USFWS, and USBR). This proposal is to address a CALFED Focused Action in the 1999 PSP concerning Suisun Marsh fish screens.

## PROJECT DESCRIPTION

### Project Description and Approach

- \* Cooperate with the Suisun Resource Conservation Conversation District (SRCD) and develop a fish entrainment monitoring plan to evaluate the need for additional fish screens in Suisun Marsh.
- \* Document the fish entrained from unscreened Suisun Marsh diversions during normal operation.
- \* Sample the fish community in the nearby channels during the normal diversion period.
- \* Compare the fish species composition and occurrence of listed species in both collection groups.
- \* Evaluate the need for fish screens or operational management actions to improve fish protection and provide recommendations for future implementation of SRCD's Suisun Marsh Fish Screen Program.

The Department of Fish and Game (DFG) with the cooperation of SRCD propose to conduct an entrainment study involving unscreened diversions in Suisun Marsh. SRCD staff would promote and secure landowner participation, obtain access permits to suitable diversion sites, and help DFG staff with field collection. A minimum of five representative unscreened diversion sites will be sampled during September through May starting in the Fall of 2000. Fish sampling would occur through the Spring of 2002.

DFG staff would use fyke nets with live boxes to collect entrained fish from the unscreened diversions during normal water operations. The fyke nets will be allowed to fish 24 hours each day of monitoring. The contents of the live boxes will be checked daily, and all fish and invertebrates identified. Diversion sampling would use the field procedures employed by the Suisun Marsh Diversion Monitoring Program which monitored fish entrainment from 1996 through 1998 (CDFG 1998). The fish entrainment information would be supplemented by DFG staff sampling the nearby water channels. Fish collection in the channels could use various fish trapping, trawling or seining techniques depending on the target species and the channel morphology. Possible collection methods include Kodiak trawl, push netting, purse seining, fixed fyke traps, barge pump, or beach seining. Fish will be identified to species, counted, body length measured, and returned to the slough.

Data will be analyzed to determine the occurrence and frequency of fish species entrained from unscreened diversions. Species and size composition of fish caught from the channel samples will be compared with fish collected from the fyke net samples. The numbers of listed species found in the fyke collections will be determined and the numbers caught from the nearby will be estimated.

### Proposed Scope of Work

Listed below are major incremental tasks for completing the proposed program. Contract work described is expected to last for approximately three years.

**Task 1: Project Planning**

- \* Consult local and agency specialists or representatives
- \* Initiate environmental collection agreements
- \* Identifying monitoring priorities associated within designated critical habitat areas in the Suisun Marsh for delta smelt and winter-run chinook salmon
- \* Select the diversions types to be sampled
- \* Select the appropriate channel fish collection methods
- \* Prepare Project Study Plan with Standard Operating Procedures and submit to appropriate technical review teams for peer-review
- \* Obtain or order the required project materials and equipment
- \* Develop field monitoring schedule and coordinate these operations with the private landowners and SRCD.

Subject to funding availability, Start Date: 2/1/2000 End Date: 6/30/2000. Deliverables: Draft and final Project Study Plan with Standard Operating Procedures, list of local and agency specialists or representatives sent copies of these documents and those who provided comments, list of potential diversions and channel sampling sites with justifications, list of project equipment ordered or obtained, status of take consultation and permits, and tentative field monitoring schedule; due by June 30, 2000.

**Task 2: Landowner Outreach and Site Procurement**

- \* Contact landowners to determine and schedule the timing and duration of flooding through unscreened diversions to managed wetlands
- \* Obtain landowner agreements to allow DFG access to the sites and permission to place the monitoring equipment on the diversions
- \* Continue contact with landowners throughout the period of the study to ensure continual dependable diversion sites and alternative monitoring sites as needed.

Start Date: 5/1/2000 End Date: 6/30/2002, Pre-Study Phase 1: Start Date: 5/1/2000 End Date: 8/31/2000, Pre-Study Phase 2: Start Date: 2/1/2001 End Date: 2/28/2001, Pre-Study Phase 3: Start Date: 7/1/2001 End Date: 8/31/2001, Pre-Study Phase 4: Start Date: 2/1/2002 End Date: 2/28/2002. Deliverables: Status report which will include a list of landowners and other appropriate parties contacted and outreach methods used, a list of landowner agreements, a map of diversions available for sampling, and their periods of availability; due by end of each pre-survey phase. Final summary report will be due by 6/30/2002.

**Task 3: Pre-Survey Preparations**

- \* Hire seasonal personnel
- \* Set up fyke nets and check field equipment for proper operation
- \* Verify the suitability of channel collection methods at each site

- \* Train personnel on safety, fish collection, fish identification, data recording, and A/QC procedures
- \* Maintenance check of boats to ensure they are functioning properly
- \* Verify vehicle access to collection sites and daily sampling schedule finalized.

**Phase 1:** Start Date: 7/1/2000 End Date: 9/15/2000, **Phase 2:** Start Date: 2/1/2001 End Date: 2/28/2001, **Phase 3:** Start Date: 8/1/2001 End Date: 9/15/2001, and **Phase 4:** Start Date: 2/1/2002 End Date: 2/28/2002. **Deliverables:** List of hired personnel, all fyke nets installed, checklists of field equipment, boats, and crew readiness, pilot collections completed and evaluated, all field personnel trained and records of training histories submitted, and list of pre-survey telephone or personal contacts with landowners done by the end of each phase.

**Task 4: Execute Monitoring Study**

- \* Collect entrained fish from unscreened diversions, record fish species, number of fish caught, fish length, environmental data, and gate opening information
- \* Sample the nearby channels and record the fish species, number of fish caught, fish length, environmental data, and location at each collection site
- \* Obtain supporting data from other biological or water quality monitoring programs in the Suisun Marsh
- \* Take down and store equipment when the sampling period has been completed.

**Phase 1:** Start Date: 9/16/2000 End Date: 1/6/2001, **Phase 2:** Start Date: 3/1/2001 End Date: 6/9/2001, **Phase 3:** Start Date: 9/16/2001 End Date: 1/5/2002, and **Phase 4:** Start Date: 3/1/2002 End Date: 6/5/2002. **Deliverables:** Complete scheduled fish collections and collect field and supporting data during each study phase by 6/5/2002.

**Task 5: Data Entry and Quality Assurance**

- \* Check data sheets for completeness before the end of each field shift
- \* Recheck data sheets for accuracy and key enter data into a database
- \* Key entered data will be examined for any discrepancies and any discrepancies will be checked for entry error
- \* Key entered data will be either checked line by line for errors (small data sets) or randomly sampled for errors (large data sets).

**Phase 1:** Start Date: 9/16/2000 End Date: 1/16/2001, **Phase 2:** Start Date: 3/1/2001 End Date: 6/18/2001, **Phase 3:** Start Date: 9/16/2001 End Date: 1/15/2002, and **Phase 4:** Start Date: 3/1/2002 End Date: 6/15/2002. **Deliverables:** Initial A/QC results posted on the DFG-Bay Delta Branch and IEP server for the Internet access by 6/30/2002.

**Task 6: Data Analyses and Reports**

- \* Analyze data to determine the occurrence, frequency, species composition,



- seasonality, location, environmental conditions, and gate condition of fish collected from the diversions and from the nearby channels
- \* Prepare final report of the monitoring program to discuss the project status, interim and final results, and recommendations for prioritizing of diversions to be screened.

Start Date: 1/1/2001 End Date: 9/30/2002. Deliverables: Final draft report; 7/31/2002, final project report; 9/30/2002, Spring/Summer IEP Quarterly Newsletter article; April or August 2002 (depending on the submission deadlines and availability of newsletter space, presentation at the annual IEP Conference February 2002, and presentation at the Cal-Neva AFS meeting; March 2002.

#### **Task 7. Project Management**

Upon funding, DFG and SRCD staff will provide brief project status reports to the CALFED Contract Manager and to the appropriate TAC/PWT (e.g., Central Valley Fish Facilities Review Team) members or interested stakeholders. Project development and management will be guided by the Principal Investigator based on comments from the TAC/PWT or the Contract Manager. Field sampling and data analysis will be performed according to the Project Work Plan which will be revised on the basis of previous comments.

Start Date: 5/1/2000 End Date: 5/1/2002. Deliverables: Quarterly fiscal and programmatic progress reports based on the federal fiscal quarters. Provide photographs showing monitoring sites, field sampling, and other activities associated with the project.

#### **Location and Geographic Boundaries of the Project**

The project will be conducted within the Suisun Marsh Region in Solano County (Figure 1; copies of appropriate USGS quad maps available upon request).

#### **Expected Ecological/Biological Benefits**

##### Background

The 1999 CALFED Proposal Solicitation Package acknowledges that in the Suisun Marsh there is a conflict to protect listed fish species from entrainment and to provide water for managed wetland. There are also uncertainties about the relative biological benefits of screens in this location relative to others. CALFED has not funded new screening projects in Suisun Marsh due to these uncertainties and is currently requesting a study to determine the relative biological impacts of unscreened diversions (CALFED 1999a).

Typical managed wetland operations show the conflict between the diversion constraints and the management objectives for unscreened diversions in Suisun Marsh. In preparation for the fall migration of waterfowl and shorebirds wetland managers begin flooding managed wetlands in

mid-September to early October. The wetland operators use gravity flow to fill and drain their wetland areas. Consequently, the managed wetlands are filled during high tides by water flowing through the inlet gates (unscreened diversions). The wetlands are drained during low tides, when water elevation in the diked wetlands is higher than in the nearby slough and water flows out through drain gates and back into the slough.

During initial flood-up, the inlet gates are opened and the drain gates remain closed to allow the managed wetlands to fill to an average depth of eight to 12 inches. After initial floodup, water is diverted from adjacent sloughs, circulated and then drained while maintaining a constant management level. Compared with the initial flood-up period, relatively small amounts of water are exchanged between the sloughs and the ponds during circulation. The circulation of water maintains water quality and prevents stagnant areas from developing. Nevertheless, during periods of heavy precipitation, water intake is terminated to avoid over filling of the managed wetland. As a result, alternative sites of diversions must be continually updated to ensure maximum field sampling during the monitoring season.

The wetlands are dewatered in late January and February to begin management activities needed to produce a diverse assemblage of wildlife habitats. Depending on the management objective of the landowners and capabilities of their properties' facilities, water level manipulations begin in February and continue through March or June. However, the National Marine Fisheries Service and U.S. Fish and Wildlife Service have imposed water diversion restrictions on unscreened diversions in the Marsh, to avoid adverse impacts to delta smelt (*Hypomesus transpacificus*), winter-run chinook salmon (*Oncorhynchus tshawytscha*), and other resident and anadromous fish populations. Therefore, implementing desired water management schedules cannot often be achieved and effective maintenance of soil salinity cannot occur on properties without the installation of fish screens. Depending on the property, the spring water is drained from the managed wetlands, from mid-March through mid-June to allow vegetative growth and performance of necessary routine maintenance activities during the summer (Steven Chappell, personal communication).

The U.S. Fish and Wildlife Service and National Marine Fisheries Service, in their Section 7 biological opinions for the Corps of Engineers Permit Number R20066E98, also require that the SRCD conduct a Diversion Assessment Program to evaluate the diversion rates of Sacramento River winter-run chinook salmon and delta smelt. The SRCD contracted DFG to monitor diversions and aid in making priority recommendations for screen placement. DFG prioritized diversion screening in the Suisun Marsh based on information obtained from surveys of critical habitat areas of delta smelt, Sacramento splittail, and winter and spring-run chinook salmon (SRCD 1998).

The resulting Suisun Marsh Diversions Monitoring Program (SMDMP) monitored unscreened Suisun Marsh diversions from 1996 through 1998 (DFG 1998). SMDMP was limited by the general lack of landowner cooperation and the lack of concurrent fish sampling in front of the diversions. Although fish abundance in the water channels near diversions have been used to estimate fish entrainment, one Delta agricultural diversion study suggests that fish entrained in these diversions can differ in species composition and relative densities compared to nearby trawl sampling (Cook and Buffalo, 1997). Although the data has not been analyzed, SMDMP data qualitatively supports this conclusion (Kevan Urquhart, personal communication). Despite the

unanswered questions about benefits of fish screens, fish entrainment concerns has resulted in screening of all of the highest priority diversions in Suisun Marsh and imposed seasonal water intake restrictions on those remaining unscreened diversions.

#### Ecological/Biological Objectives

The proposal focuses on the determining the benefits of screening water diversions in Suisun Marsh by examining the fish entrainment from unscreened diversions and compares these rates with fish collected in nearby channels during period of normal water operations. To assess the benefits of screening additional water diversions, monitoring of unscreened diversions are needed to determine the magnitude of the entrainment of listed species in relation of their proximity to critical habitat areas. We hypothesize that 1) diversions distant from designated critical habitat areas may entrain fewer listed species, 2) diversion rate (as indexed by gate opening) influences entrainment rate, and 3) the fish composition of entrained fish may differ from the nearby channels. Obtaining information on these areas would help CALFED resource managers determine the benefits of screening diversions in Suisun Marsh by providing entrainment loss estimates for representative unscreened diversions and by determining whether the entrainment of listed species is related to critical habitat areas, diversion operation, or channel abundance.

#### Linkages

Previous projects have been discussed in the Background sections. This proposal is in response to the 1999 Proposal Solicitation Package where the Focused Action under the Fish Passage/Fish Screen asked for a study to determine the relative biological impacts of Suisun Marsh diversions (CALFED 1999a, pg. 17). Obtaining data to develop a science-based evaluation process to prioritize screening diversions is short-term objective to achieve the longterm objective to eliminate or reduce adverse impacts of water diversions (CALFED 1999b, pg. 438). The reduction of fish entrainment is the strategic objective toward addressing the major stressor, water diversions (CALFED 1999b, pg. 419). Installation of positive barrier fish screens has been the primary action for achieving this objective (CALFED 1999b, pg. 428). Screening small diversions in Suisun Marsh has been cited as a recommended restoration activity (CALFED 1999b, pg. 429 and 1999c, pg. 135).

These actions would support CALFED's overall "*Goal 1: Achieve recovery of at-risk native [species] dependent on the Delta and Suisun Bay*" (CALFED 1999b, pg. 176). Fish screens in Suisun Marsh would protect all of the Priority Group I fish species; delta smelt, longfin smelt, green sturgeon, splittail, Sacramento winter-run, spring-run, late-fall-run chinook salmon, fall-run chinook salmon, and steelhead trout (CALFED 1999b, pg. 177-8 and 1999c, pg. 128) and other priority group fish such as striped bass, white sturgeon, American shad and native resident fish (CALFED 1999c, pg. 128).

#### System-Wide Ecosystem Benefits

Resolving the benefits of screening Suisun Marsh diversions would enhance CALFED efforts with restoration efforts on a watershed level. The major objective of this study is to provide CALFED managers information to assess the potential benefits of screening Suisun

Marsh relative to other restoration actions considering the upper watershed. Restoration funds could be directed toward projects with the greatest proven biological benefits.

#### **Technical Feasibility and Timing**

Laboratory investigations were ruled out due to the technical difficulties to simulate tidal flow conditions and obtaining sufficient numbers of healthy juvenile Priority Group I fish. Entrainment sampling using screened diversions in Suisun Marsh would expose landowners to additional liabilities and voluntary involvement would be nil. Volumetric determination of entrainment is considered problematic since intake is dependent on several varying factors (tidal stage, head differential, gate height, diversion operation) there are no cost-effective methods to accurately estimate intake with this type of diversion (Jim Starr, personnel communication).

Review of the proposal study plan would be needed from ACOE, NMFS, and USFWS and will commence when SRCD permits undergo review later this year. Based on listed species reporting procedures for the SMDMP, we will request that the take permit be covered under the Interagency Ecological Program (IEP) Biological Opinions.

Existing technical advisory teams such as the IEP Central Valley Fish Facilities Review Team and the Suisun Marsh Salinity Control Gates Steering Group will be consulted when resolving outstanding implementation issues.

#### **Monitoring and Data Collection Methodology**

##### **Biological/Ecological Objectives**

The primary objective is to determine the benefits on screening diversions in Suisun Marsh. The questions to be asked are 1) how many fish, especially Priority Group I species, are entrained in unscreened Suisun Marsh diversions, 2) does the location influence fish entrainment, 3) does the gate operation influence fish entrainment, and 4) what is the relationship between fish entrainment and the fish community in the nearby channels. We hypothesize that 1) diversions distant from designated critical habitat areas may entrain fewer listed species, 2) diversion rate (as indexed by gate opening) influences entrainment rate, and 3) the fish composition of entrained fish may differ from the nearby channels.

##### **Monitoring Parameters and Data Collection Approach**

Monitoring parameters include fish species, the number of fish per sample, fish size, collection site, collection method, collection duration, diversion diameter, height of gate opening, water temperature, water clarity, and specific conductance. Data collection approach consists of daily fyke net sampling during the weekdays where the net is fished for a 24-hour period. A minimum of five representative diversions will be sampled during September through December and March through May. Channel fish collection will occur three days per week using methods yet to be determined and samples will be taken near each diversion. Each collection effort will require a crew of three people. Data recording procedures will be coordinated with standard procedures developed from the previous SMDMP.

##### **Data Evaluation Approach**

Based on five diversions sampled during the weekdays, approximately 1,100 fish samples will be collected from unscreened diversions during the study period. The number of fish samples collected from the nearby channels will depend on the type and efficiency of the collection method used. Assuming that one fish sample at five sites each channel collection day is an conservative estimate, 1,060 fish samples would be taken from the nearby channels. Fish will be identified, numerated, measured, and released in the field. Standard fish identification references (Miller and Lea 1972, Eddy and Underhill 1978, Wang 1986) and DFG specialists will be used to verify the identity of field specimens. Fish specimens will be brought back to the CVBDB laboratory if an accurate field identification is not possible. Location of sampling sites determined using USGS quad maps for the diversion or GPS readings for channel stations and categorized using the critical habitat criteria. DFG Standard Operating Procedures for water quality measurements will be used (Edwards and Fujimura 1998).

A draft and final report will be written toward the end of the study period. The initial evaluation approach is summarized in Table 1. Data management issues will be resolved through consultation with biologists involved with the SMDMP, DFG Delta Smelt Project, IEP RTM, USFWS Delta Salmon Project. Peer review will achieved through consulting the members of the CVFF Review Team on fish monitoring and data evaluation issues.

#### **Local Involvement**

This is a new CALFED proposal and local support is expected when funds are available. Outreach contacts with Suisun Marsh private landowners, sportsmen club operators, DFG refuge staff, ACOE representatives, DWR staff, and other interested groups are planned and are designated task items for the SRCD staff. Notification of intent letters have sent to the Solano County Board of Supervisors and to the Director of the County Department of Environmental Management (see Attachments). SRCD staff will notify the private landowners, local operators, and agency representatives through the District's quarterly newsletter, telephone calls and personal contacts. Written permission for property use and access will be obtained through the SRCD prior to the start of any entrainment monitoring. No third party impacts have been identified at this time.

#### **Cost**

##### **Budget**

This proposal requests a total grant of \$464,000 over a three-year period which \$36,060 will be allocated to SRCD and the remainder of the fund allocated to DFG. Table 2 provides the total budgeted costs requested from CALFED for each task listed in the Scope of Work. Table 3 shows the budget costs by each on a quarterly basis.

#### **Cost-Sharing**

All costs of project administration and supervision by SRCD's Executive Director will be contributed by SRCD. Department of Water Resources and U.S. Bureau of Reclamation will be

sent copies of this proposal and will be asked to help defray CALFED's costs through cost sharing or through in-kind service.

#### **Applicant Qualifications**

**Suisun Resource Conversation District Staff:** **Steven Chappell**, will provide staff supervision and contract administration for the SRCD obligation to coordinate with local landowners and obtain suitable diversion sites under the proposed study. Mr. Chappell has worked as the SRCD District Biologist for four years before serving as the current **Executive Director** of SRCD. His daily duties include the design and implementation of scientific studies in the Suisun Marsh, assisting in wetland management activities, implementation of various wetland restoration and enhancement projects, participation in numerous Suisun Marsh technical and advisory committees, supervision of field crews and monitoring programs, and the completion of the resultant monitoring and compliance reports. In past cooperative studies with DFG, Mr. Chappell has successfully conducted the landowner coordination aspect of similar field studies, and will be supervising SRCD's component of the proposed study.

A SRCD District Biologist will be hired to 1) contact landowners and obtain diversion operation schedules, 2) obtain access and equipment siting agreements, 3) provide landowner coordination to ensure adequate number of primary and alternate diversions throughout the project, 4) assist DFG in identifying monitoring priorities associated within designated critical habitat areas in the Suisun Marsh for delta smelt, winter-run chinook salmon, and other sensitive species, and 5) assist DFG field monitoring crews through the study period.

**California Department of Fish and Game Staff:** DFG's obligation will be conducted by the Fish Facilities Research Unit (FFRU), lead by Robert Fujimura, and staffed by George Edwards, Doug Killam, Ramiro Soto, Paul Macias and various temporary Scientific Aides. This Unit is within the Fish Facilities Program supervised by Dan Odenweller, of the DFG Central Valley Bay Delta Branch. The Branch has been conducting applied research on the S.F. Bay and Sacramento-San Joaquin Delta for more than 35 years, and the Fish Facilities Program has been conducting applied bioengineering research on fish screening, passage, and agricultural/municipal/SWP/CVP diversions for more than 25 years. Current funded fish screening studies include fish handling and trucking evaluations at Skinner Fish Facilities (IEP), Delta fish screening performance (UCD Fish Treadmill Project), Delta small diversion monitoring (CALFED), and mitten crab movement study (USBR). Administration, project management, and technical oversight will be provided by Mr. Odenweller. The project will be lead by Mr. Fujimura, who will be responsible for the technical details, project implementation, report writing, and data analysis, assisted by Mr. Killam. The field project will be conducted by Mr. Killam, Soto, and Macias, with other temporary staff. Short staff biographies are included below and complete resumes can be obtained by contacting Mr. Odenweller.

**Dan Odenweller:** B.S. in Zoology, CSU Long Beach 1969, M.A. in Biology, CSU Long Beach 1971. **Senior Biologist Supervisor** (Marine/Fisheries), Statewide Fish Screen and Fish Passage Coordinator for the DFG Inland Fisheries Division; 7/91-present. Responsible for the statewide coordination of efforts to protect Inland fishery resources through the installation and operation of fish screens and fish passage facilities. Resumed program leadership of the FFRU in

11/98. Member or chairperson of IEP Fish Facilities Coordination and Technical Review Teams. Joined DFG in 1971 and became the Project Leader of the Bay-Delta Project Fish Facilities Study in 1974. Conducted biological studies associated with the development of design criteria for the "Peripheral Canal" fish screens. In 1978, promoted to Research Supervisor of the Bay-Delta Project Fish Facilities Program which expanded to include the Fish Salvage Operations Program associated with the CVP and SWP fish screens in the south Delta. Served as Chairman of the Fish Facilities Technical Committee of the Interagency Ecological Study Program for the Sacramento-San Joaquin Estuary. Also served as the lead technical staff person for the P.G.&E., "Four Pumps," and the CVP mitigation agreements. In this capacity presented testimony to the State Water Resources Control Board on the effects of direct losses at the CVP and SWP fish protective facilities in the south Delta. Supervised the Contract Services Section and the Suisun Marsh Project during some of this period, which included serving as lead technical staff person for the Suisun Marsh preservation agreements. Lead the fish and wildlife study teams working on the Los Banos Grandes, Cottonwood, North and South Delta Facility projects. Also lead the team conducting the "Upper Sacramento River IFIM" project to a successful completion.

**Robert W. Fujimura:** B.S. in Fisheries and B.A. in Biology Humboldt State Univ. 1977, Limnology Program, Uppsala Univ. (Sweden) 1980, M.S. in Natural Resources (Fisheries) Humboldt State University 1986. **Associate Biologist (Marine/Fisheries), Fish Facilities Program,** 5/96-present. Principal Investigator and Lead Person for FFRU, responsible for the development, execution, analysis, and reporting of field and laboratory investigations of new and existing fish passage facilities in Sacramento-San Joaquin Estuary. Participates with the CALFED Fish Facilities Technical Team and with other interagency teams involved with fish screening or passage issues. Became the Branch's specialist on fishery hydroacoustic monitoring. Oversees an adult salmon passage monitoring program for mitigation measures for the Suisun March Salinity Control Gates (SMSCG). Coordinates DFG field and laboratory assistance to the UCD Fish Treadmill Project and acts as a technical advisor to the project. Directs up to three biologists, two FW Assistants, and several Scientific Aides. Joined DFG in 1987 at the Bay Delta Division in Stockton, served there as a Range B Fishery Biologist on the Young Striped Bass Program and helped design and direct field and laboratory studies for egg and larval striped bass monitoring program. Promoted to Associate Water Quality Biologist and later to ES III as the Principal Investigator and Lead Person of the DFG Aquatic Toxicology Laboratory, responsible for the development, execution, analysis, and reporting of toxicological studies and experiments at this facility until returning to Bay-Delta to serve in his current position.

**Douglas S. Killam:** B.S. in Forest Products 1985, M.S. in Forest Resources Penn. State Univ. 1987. **Fishery Biologist, Range B, Fish Facilities Program and Real Time Monitoring Program (RTM),** 5/97-present. Assists in the design and implementation of laboratory and field investigations for FFRU. Assists with fish behavioral experiments for the UCD Fish Treadmill Project. Responsible for daily operation of RTM, staff scheduling, training, gear acquisition, and field crew leading. Has assisted with 1998 SMSCG adult salmon telemetry study, conducted telemetry evaluations on juvenile chinook salmon, and trained staff on surgical implanted techniques for biotelemetry. Worked as a U.S. Peace Corps aquaculture extension agent in Zaire and taught aquaculture and fisheries management. Recorded and analyzed commercial catch data from an arctic fishing vessel as an NMFS Observer. Collected striped bass creel census data and

conducted field sampling for salmon surveys in the Bay-Delta area as a DFG Scientific Aid. Conducted field investigation using screw traps, electrofishing gear, fyke nets, beach seines, and SCUBA observations of anadromous fish in the upper Sacramento River as an USFWS Biological Sciences Technician. Joined DFG Bay-Delta in 1997. Has obtained technical training certifications as an NMFS observer, in aquaculture, fish telemetry, and fish passage issues.

**Paul C. Macias:** course credits in Administration of Justice, Merced Community College and in Biology, American River College. **Fish and Wildlife Assistant I**, Fish Facilities Research Project, 12/95-present. Assists biologists with biological sampling, fish identification, numeration, data recording, and equipment maintenance. Frequently works as the small boat operator and field crew leader for the Unit and other DFG Bay-Delta projects, such as the Georgianna Slough Acoustical Barrier (GSAB) Project, Delta Smelt Project, North Bay Aqueduct Project, S.F. Bay Study, and RTM. Participates as a laboratory observer/crew leader for the UCD Treadmill Project. Joined DFG in 1981 as a Fish and Wildlife Seasonal Aid and helped the regional biologist for Merced County for three terms. Assisted the spawning and rearing of chinook salmon at the DFG Merced River Fish Facility for two terms. Promoted to Fish and Wildlife Assistant I in 1987 and worked as the primary laboratory and field support technician to the DFG Water Pollution Control Laboratory.

**Ramiro Soto:** **Fish and Wildlife Assistant I**, Fish Facilities Research Project, 1/92-present. Assists biologists with biological sampling, fish identification, numeration, data recording, and equipment maintenance. Often works as the small boat operator and field crew leader for the Unit and other DFG Bay-Delta projects, such as the Delta Smelt Project, North Bay Aqueduct Project, and RTM. Acts as a laboratory crew leader for the UCD Treadmill Project. Helped capture, tag, and track adult chinook salmon with radio and ultrasonic tags for barrier passage studies at the SMSCG and the GSAB. Also participated in the predator striped bass studies at Clifton Court Forebay. Worked seven terms as a Scientific Aid for DFG Region 4 constructing and installing fish screens, artificial fish habitat structures for reservoirs, fish ladders, and fish traps. Lead CCC crews in habitat restoration projects and worked on creel censuses.

#### **Compliance with Standard Terms and Conditions**

The applicant agrees to the standard terms and conditions provided in Attachments D and E in CALFED (1999a). A copy of the terms and conditions are attached.

#### **References Cited**

- CALFED Bay-Delta Program. 1999a. Proposal solicitation package. February 1999. Ecosystem Restoration Projects and Programs.
- CALFED Bay-Delta Program. 1999b. Ecosystem Restoration Program Plan Volume 1 Ecological attributes of the San Francisco Bay-Delta Watershed. Revised Draft Programmatic EIS/EIR, Technical Appendix. February 1999. Ecosystem Restoration Projects and Programs.
- CALFED Bay-Delta Program. 1999c. Ecosystem Restoration Program Plan Volume 2 Ecological management zone visions. Revised Draft Programmatic EIS/EIR, Technical Appendix. February 1999. Ecosystem Restoration Projects and Programs.



- California Department of Fish and Game. 1998. 1997-1998 sampling report for the Diversion Monitoring Program, a component of the Suisun Marsh Diversion Screening Program. August 3, 1998. Contract report for the Suisun Resource Conservation District. Bay-Delta and Special Water Projects Division.
- Cook L. and L. D. Buffaloe. 1998. Delta agricultural diversion evaluation summary report, 1993 - 1995. Interagency Ecological Program Technical Report 61. June 1998. Department of Water Resources Environmental Services Office.
- Eddy, S. and J. C. Underhill. 1978. *How to know the freshwater fishes*. W.C. Brown Co. Publishers.
- Edwards, G. W. and R. W. Fujimura. 1998. Final Quality Assurance Project Plan for the 1998 evaluation of the modification of the Suisun Marsh Salinity Control Gates on adult fall-run chinook salmon passage. October 21, 1998. DFG Bay-Delta and Special Water Project Division, Fish Facilities Research Unit.
- Miller, D. J. and R. N. Lea. 1972. Guide to the coastal marine fishes of California. California Fish Bulletin Number 157. University of California Publication 4065.
- Suisun Resource Conservation District. 1998. Suisun Marsh Fish Screen Program - 1998 CALFED Bay-Delta Program Proposal Solicitation Application. July 1, 1998. Submitted by Lee Lehman, Executive Director.
- Wang, J. C. S. 1986. Fishes of the Sacramento-San Joaquin Estuary and adjacent waters, California: a guide to the early life histories. Interagency Ecological Study Program Technical Report 9. January 1986.

Table 1. Monitoring and Data Collection Information

Biological/Ecological Objectives			
Question to be Evaluated	Monitoring Parameter and Data Collection Approach	Data Evaluation Approach	Comments/Data Priority
How many fish, especially Priority Group 1 species, are entrained in unscreened Suisun Marsh diversions?	Number of fish by species obtained from daily fyke net collections	Examine the total catch by species per two-week interval for all diversions	The frequency of entrained listed fish species has high data priority
Does the location influence fish entrainment?	Same as above; location	Examine the total catch by species per two-week interval for each diversions; group diversion by DFG critical habitat criteria	The location of entrained listed fish species has high data priority
Does the gate operation influence fish entrainment?	Same as above; fish size, height of gate opening, diversion diameter	Graph the total catch by species per day for each diversions; group diversion by percent gate opening and diversion diameter; examine the size distribution of fish by percent gate opening and diversion diameter	
What is the relationship between fish entrainment and the fish community in the nearby channels?	Number and size of fish by species obtained from daily fyke net collections and from the three time per week channel fish collections	Plot the number of fish entrainment against the number of fish caught in the nearby channel. Compare the percent species composition from both locations.	

Table 2. Total Budget for Biological Evaluation of Suisun Marsh Diversion

Task	Direct Labor Hours	Direct Salary and Benefits	Service Contracts	Material and Acquisition Costs	Misc and Other Direct Costs	Overhead and Indirect Costs	Total Cost
Task 1 Project Planning	296	\$9,995	\$0	\$8,500	\$120	\$4,730	\$23,345
Task 2 Landowner Coordination	784	\$13,250	\$0	\$1,380	\$0	\$2,530	\$17,160
Task 3 Pre-Survey Preparations	1,760	\$38,450	\$0	\$1,500	\$1,060	\$12,800	\$53,810
Task 4 Conduct Monitoring	9,846	\$180,835	\$1,200	\$9,700	\$33,290	\$61,500	\$286,525
Task 5 Data Entry and QA	824	\$15,875	\$0	\$100	\$0	\$4,680	\$20,655
Task 6 Data Analysis and Report Writing	1,800	\$38,170	\$0	\$200	\$2,000	\$11,670	\$52,040
Project Management Task 7	192	\$7,715	0	0	0	\$2,315	\$10,030

Table 3. Quarterly Budget (in dollars) for Biological Evaluation of Suisun Marsh Diversion

Task	1th Qtr 00	2nd Qtr 00	3rd Qtr 00	4th Qtr 00	1th Qtr 01	2nd Qtr 01	3rd Qtr 01	4th Qtr 01	1th Qtr 02	2nd Qtr 02	3rd Qtr 02	Total Budget
Task 1 Project Planning	3,900	19,445	0	0	0	0	0	0	0	0	0	23,345
Task 2 Landowner Outreach	0	0	2,955	2,145	1,820	1,660	2,955	2,145	1,820	1,660	0	17,160
Task 3 Pre-Survey Preparations	0	0	22,350	0	6,740	0	17,980	0	6,740	0	0	53,810
Task 4 Monitoring	0	0	12,790	58,800	25,645	49,485	11,340	60,175	23,845	44,445	0	286,525
Task 5 Data Entry and QA	0	0	790	2,490	2,300	3,100	790	2,785	5,200	3,200	0	20,655
Task 6 Data Analysis and Report Writing	0	0	0	0	8,040	6,970	0	0	7,270	6,450	23,310	52,040
Task 7 Project Management	0	1,115	1,115	1,115	1,115	1,115	1,115	1,115	1,115	1,110	0	10,030
<b>Total</b>	<b>3,900</b>	<b>20,560</b>	<b>40,000</b>	<b>64,550</b>	<b>45,660</b>	<b>62,330</b>	<b>34,180</b>	<b>66,220</b>	<b>45,990</b>	<b>56,865</b>	<b>23,310</b>	<b>463,565</b>

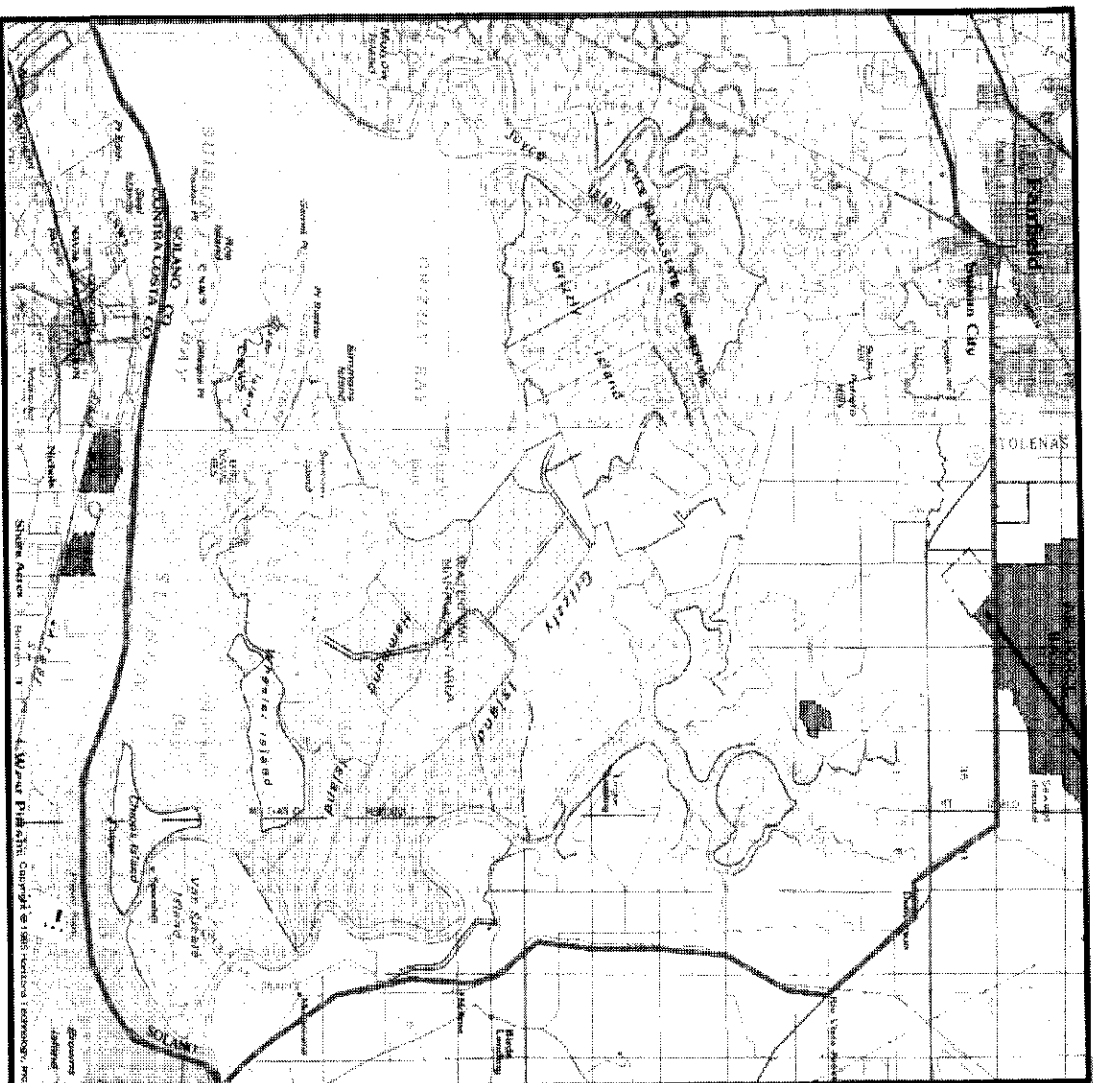


Figure 1. Suisun Marsh study area boundary

**Attachment D**  
**Terms and Conditions for State (CALFED) Funds**

This section provides contract terms and conditions applicable to contracts issued under State (CALFED) funds. The specific terms and conditions may vary, depending on the applicant category (State entities, Federal and other public entities, non-profit organizations, and private entities), and the type of project (Public Works/Construction or Services), as identified in Table D-1. Specific documents that should be submitted with the proposal are shown in Table D-1.

The general terms and conditions which will apply to Category III contracts funded with Proposition 204 funding are provided below.

In addition to these general terms and conditions, specific additional standard clauses will be applicable depending on the type of project and applicant category. Table D-1 provides a summary of those standard clauses for different types of projects and different applicant categories. Those standard clauses are provided at the end of this attachment.

1. **Term of Contract:** The term of the agreement will be dependent on the project and may range from 1 to 3 years. The agreement shall not become effective until fully executed by the parties and approved by the Department of General Services.
2. **Payment Schedule:** No funds will be disbursed by State or National Fish and Wildlife Foundation (NFWF) to Contractor without 1) an executed copy of the Contract, 2) receipt of an original invoice with supporting documentation, and 3) receipt and satisfactory completion of deliverables and/or phases of work as set forth in the agreement, including quarterly financial and programmatic reports. Payments shall be in arrears within 30 days of receipt of invoice by CALFED.
3. **Budget Variances:** Variances which exceed ten percent of a project task's approved budgeted amount should have approval in advance, with written explanations of programmatic changes to cover such variances but must remain within the maximum contract amount.
4. **Subcontracts:** Contractors are responsible for all subcontracted work. Subcontract terms and conditions must include all applicable contract terms and conditions as presented herein. Subcontractor agreements require approval by the State or NFWF, unless the subcontract was included and approved as part of the main proposal. Any amendments to subcontract must be approved by the State or NFWF. In obtaining subcontracts, contractor must obtain at least 3 competitive bids for all subcontracted work, or comply with the provisions of Government Code Section 4525 et seq., if applicable, or submit written justification for and obtain the State's or NFWF's approval of non-compliance with these requirements.
5. **Substitution:** Should the State or NFWF be dissatisfied with the work of subcontractors or employees of the contractor, the State or NFWF may require the contractor to substitute different qualified subcontractors or employees. The State or NFWF must approve such substitutions in advance of providing applicable services.
6. **Conflict of Interest:** Contractor shall comply with all applicable State laws and rules pertaining to conflict of interest, including but not limited to Government Code 1090 and Public Contract Code 10410 and 10411.
7. **Standard of Professionalism:** Contractor shall conduct all work consistent with the professional standards for the industry and type of work being performed under the contract.
8. **Rights in Data:** All data and information obtained and/or received under contract shall be in the public domain. Contractor shall have the right to disclose, disseminate and use, in whole or part, any

final form data and information received, collected and developed under this agreement, subject to inclusion of appropriate acknowledgment of credit to the State or NFWF, CALFED, and all cost sharing partners for their financial support. Use of draft data requires pre-approval by State or NFWF and CALFED. Contractor shall not sell or grant rights to a third party who intends to sell such product as a profit-making venture.

9. Indemnification: The Contractor agrees to indemnify, defend and hold harmless the CALFED agencies, the State of California, the Resources Agency, Department of Water Resources, and National Fish and Wildlife Foundation and their officers, agents and employees from any and all claims and losses accruing or resulting to any or all contractors, subcontractors, material persons, laborers, and any other person, firm or corporation furnishing or supplying work services, materials or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by the Contractor in the performance of this contract.

10. Independent Status: The Contractor, and the officers, agents and employees of Contractor, in the performance of the contract, shall act in an independent capacity and not as officers or employees or agents of the State of California, NFWF, CALFED Agencies, the Resources Agency, or Department of Water Resources.

11. Termination Clause: The State or NFWF may terminate this agreement and be relieved of the payment of any consideration to Contractor should Contractor fail to perform the covenants herein contained at the time and in the manner herein provided. In the event of such termination the State or NFWF may proceed with the work in any manner deemed proper by the State. The cost to the State shall be deducted from any sum due the Contractor under this agreement, and the balance, if any shall be paid the Contractor upon demand.

12. Assignment: Without the written consent of the State, this agreement is not assignable by Contractor either in whole or in part.

13. Integration Clause: No alteration or variation of the terms of this contract shall be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement not incorporated herein, shall be binding on any of the parties hereto. This contract may be amended upon mutual written agreement of the parties and approved by State or NFWF and CALFED.

14. Consideration: The consideration to be paid Contractor as provided herein, shall be in compensation for all of the Contractor's expenses incurred in the performance hereof, including travel and per diem, unless otherwise expressly so provided.

15. Dispute Resolution: Any claim that Contractor may have regarding the performance of this agreement including, but not limited to, claims for additional compensation or extension of time, shall be submitted to the Executive Director, CALFED, within thirty days of its accrual, CALFED and Contractor shall then attempt to negotiate a resolution of claim and process an amendment to this agreement to implement the terms of any such resolution.

16. Time is of the essence in this agreement.

U.S. Department of the Interior

**Certifications Regarding Debarment, Suspension and  
Other Responsibility Matters, Drug-Free Workplace  
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions:

**Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions -** The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used; use this form for certification and sign; or use Department of the Interior Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions -** (See Appendix B of Subpart D of 43 CFR Part 12.)

**Certification Regarding Drug-Free Workplace Requirements -** Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

---

**PART A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters -  
Primary Covered Transactions**

---

CHECK X IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

**PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -  
Lower Tier Covered Transactions**

---

CHECK    IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

DI-2010  
March 1995  
(This form consolidates DI-1953, DI-1954,  
DI-1955, DI-1956 and DI-1963)



**PART C: Certification Regarding Drug-Free Workplace Requirements**

CHECK X IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL

**Alternate I. (Grantees Other Than Individuals)**

**A. The grantee certifies that it will or continue to provide a drug-free workplace by:**

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about--
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's policy of maintaining a drug-free workplace;
  - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
  - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
  - (1) Abide by the terms of the statement; and
  - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --
  - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
  - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a) (b), (c), (d), (e) and (f).

**B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:**

Place of Performance (Street address, city, county, state, zip code)

4001 North Wilson Way

Stockton, San Joaquin County, California 95205

Check      if there are workplaces on file that are not identified here.

**PART D: Certification Regarding Drug-Free Workplace Requirements**

CHECK      IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL

**Alternate II. (Grantees Who Are Individuals)**

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant.
- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

**PART E: Certification Regarding Lobbying**  
**Certification for Contracts, Grants, Loans, and Cooperative Agreements**

CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND  
THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT;  
SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL  
LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR  
SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED NAME AND TITLE

for Dr. Perry Hargessell

Branch Chief

DATE

April 16, 1999

# APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0349-0043

<b>1. TYPE OF SUBMISSION:</b> Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		<b>2. DATE SUBMITTED</b> April 16, 1999	Applicant Identifier  State Application Identifier  Federal Identifier																												
<b>5. APPLICANT INFORMATION</b>																															
Legal Name: California Department of Fish and Game Address (give city, county, State, and zip code): 4001 North Wilson Way Stockton, San Joaquin Co., California 95205		Organizational Unit: Central Valley Bay Delta Branch Name and telephone number of person to be contacted on matters involving this application (give area code): Coordinator - Sonny Olasco (209) 942-6132																													
<b>6. EMPLOYER IDENTIFICATION NUMBER (EIN):</b> 94 - 1697567		<b>7. TYPE OF APPLICANT: (enter appropriate letter in box)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           A. State            B. County            C. Municipal            D. Township            E. Interstate            F. Intermunicipal            G. Special District         </div> <div style="width: 45%;">           H. Independent School Dist.            I. State Controlled Institution of Higher Learning            J. Private University            K. Indian Tribe            L. Individual            M. Profit Organization            N. Other (Specify) _____         </div> </div> <input checked="" type="checkbox"/> A																													
<b>8. TYPE OF APPLICATION:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): <div style="display: flex; justify-content: space-around;"> <div>A. Increase Award D. Decrease Duration</div> <div>B. Decrease Award Other(specify):</div> <div>C. Increase Duration</div> </div>		<b>9. NAME OF FEDERAL AGENCY:</b>  																													
<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:</b> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto;"></div> TITLE:		<b>11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b> Biological Evaluation of Suisun Marsh Unscreened Diversions																													
<b>12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):</b> Suisun Marsh (Solano County)		<b>13. PROPOSED PROJECT</b> <b>14. CONGRESSIONAL DISTRICTS OF:</b> District 3																													
Start Date 2/1/00	Ending Date 9/30/02	a. Applicant DFG-CVBDDB  b. Project Fish Facilities Research																													
<b>15. ESTIMATED FUNDING:</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">a. Federal</td> <td style="width: 10%;">\$</td> <td style="width: 40%;">464,000</td> <td style="width: 10%;">00</td> </tr> <tr> <td>b. Applicant</td> <td>\$</td> <td></td> <td>00</td> </tr> <tr> <td>c. State</td> <td>\$</td> <td></td> <td>00</td> </tr> <tr> <td>d. Local</td> <td>\$</td> <td></td> <td>00</td> </tr> <tr> <td>e. Other</td> <td>\$</td> <td></td> <td>00</td> </tr> <tr> <td>f. Program Income</td> <td>\$</td> <td></td> <td>00</td> </tr> <tr> <td>g. TOTAL</td> <td>\$</td> <td>464,000</td> <td>00</td> </tr> </table>		a. Federal	\$	464,000	00	b. Applicant	\$		00	c. State	\$		00	d. Local	\$		00	e. Other	\$		00	f. Program Income	\$		00	g. TOTAL	\$	464,000	00	<b>16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?</b>  a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:  DATE _____  b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
a. Federal	\$	464,000	00																												
b. Applicant	\$		00																												
c. State	\$		00																												
d. Local	\$		00																												
e. Other	\$		00																												
f. Program Income	\$		00																												
g. TOTAL	\$	464,000	00																												
<b>18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.</b>		<b>17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?</b> <input type="checkbox"/> Yes    If "Yes," attach an explanation. <input checked="" type="checkbox"/> No																													
a. Type Name of Authorized Representative Mr. Perry Herrgesell		b. Title Branch Chief																													
d. Signature of Authorized Representative 		c. Telephone Number (209) 948-7800  e. Date Signed April 16, 1999																													

Previous Edition Usable  
Authorized for Local Reproduction

Standard Form 424 (Rev. 7-97)  
Prescribed by OMB Circular A-102

I - 0 1 2 9 7 2

I-012972

## ASSURANCES - NON-CONSTRUCTION PROGRAMS

OMB Approval No.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for review, instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency; the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

INSTRUCTIONS FOR THE SF-424A (continued)

narrative statement the nature and source of income. The estimated amount of program income may be considered by the federal grantor agency in determining the total amount of the grant

**Section C. Non-Federal Resources**

**Lines 8-11**--Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet.

**Column (a)** - Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

**Column (b)** - Enter the contribution to be made by the applicant.

**Column (c)** - Enter the amount of the State's cash and in-kind contribution if the applicant is not a State or State agency. Applicants which are a State or State agencies should leave this column blank.

**Column (d)** - Enter the amount of cash and in-kind contributions to be made from all other sources.

**Column (e)** - Enter totals of Columns (b), (c), and (d).

**Line 12**--Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f) Section A.

**Section D. Forecasted Cash Needs**

**Line 13**--Enter the amount of cash needed by quarter from the grantor agency during the first year.

**Line 14**--Enter the amount of cash from all other sources needed by quarter during the first year.

**Line 15**--Enter the totals of amounts on Lines 13 and 14.

**Section E. Budget Estimates of Federal Funds Needed for Balance of the Project.**

**Lines 16-19**--Enter in Column (a) the same grant program titles shown in Column (a), Section A. A breakdown by function or activity is not necessary. For new applications and continuation grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding period (usually in years). This section need not be completed for revisions (amendments, changes, or supplements) to funds for the current year of existing grants.

If more than four lines are needed to list the program titles, submit additional schedules as necessary.

**Line 20**--Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

**Section F. Other Budget Information**

**Line 21**--Use this space to explain amounts for individual direct object-class cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

**Line 22**--Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

**Line 23**--Provide any other explanations or comments deemed necessary.

**BUDGET INFORMATION - Non-Construction Programs****SECTION A - BUDGET SUMMARY**

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Planning, Outreach Project Mtg		\$	\$	\$ 50,535	\$	\$ 50,535
2. Pre-Survey Preparations				53,810		53,810
3. Monitoring				286,525		286,525
4. Data Entry, Report Writing				72,695		72,695
5. Totals		\$	\$	\$ 463,565	\$	\$ 466,565

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	\$ 30,960	\$ 38,450	\$ 180,835	\$ 54,045	\$ 304,290
b. Fringe Benefits					
c. Travel				2,000	2,000
d. Equipment	8,000		4,000		12,000
e. Supplies	1,880	1,500	5,700	300	9,380
f. Contractual			1,200		1,200
g. Construction					
h. Other	120	1,060	33,290		34,470
i. Total Direct Charges (sum of 6a-6h)	40,960	41,010	225,025	56,345	363,340
j. Indirect Charges	9,575	12,800	61,500	16,350	100,225
k. TOTALS (sum of 6i and 6j)	\$ 50,535	\$ 53,810	\$ 286,525	\$ 72,695	\$ 463,565
7. Program Income	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Previous Edition Usable

Authorized for Local Reproduction

Standard Form 424A (Rev. 4-92)  
Prescribed by OMB Circular A-102

1-012975

1-012975

# INSTRUCTIONS FOR THE SF-424

Public reporting burden for this collection of information is estimated to average 45 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0043), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item: | Entry:   | Item: | Entry:   |
|-------|--|-------|--|
| 1.    | Self-explanatory.  | 12.   | List only the largest political entities affected (e.g., State, counties, cities).   |
| 2.    | Date application submitted to Federal agency (or State if applicable) and applicant's control number (if applicable).  | 13.   | Self-explanatory.  |
| 3.    | State use only (if applicable).  | 14.   | List the applicant's Congressional District and any District(s) affected by the program or project.  |
| 4.    | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank.  | 15.   | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate <i>only</i> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5.    | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application.   | 16.   | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process.  |
| 6.    | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service.  | 17.   | This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes.  |
| 7.    | Enter the appropriate letter in the space provided.  | 18.   | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.)  |
| 8.    | Check appropriate box and enter appropriate letter(s) in the space(s) provided:<br><br>— "New" means a new assistance award.<br><br>— "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.<br><br>— "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. |       |  |
| 9.    | Name of Federal agency from which assistance is being requested with this application.   |       |  |
| 10.   | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested.  |       |  |
| 11.   | Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project.  |       |  |

SF-424 (Rev. 7-87) Back

SECTION C - NON-FEDERAL RESOURCES						
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8.		\$	\$	\$	\$	
9.						
10.						
11.						
12.	TOTAL (sum of lines 8 - 11)	\$	\$	\$	\$ 0	
SECTION D - FORECASTED CASH NEEDS						
		Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13.	Federal	\$ 64,460	\$ 0	\$ 3,900	\$ 20,560	\$ 40,000
14.	NonFederal	0	0	0	0	0
15.	TOTAL (sum of lines 13 and 14)	64,460	0	3,900	20,560	40,000
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT						
(a) Grant Program		FUTURE FUNDING PERIODS (Years)				
		(b) First	(c) Second	(d) Third	(e) Fourth	
16.	CALFED	\$ 206,720	\$ 192,385	\$	\$	
17.						
18.						
19.						
20.	TOTAL (sum of lines 16-19)	\$ 206,720	\$ 192,385	\$	\$	
SECTION F - OTHER BUDGET INFORMATION						
21. Direct Charges:		22. Indirect Charges:				
23. Remarks:						



# INSTRUCTIONS FOR THE SF-424A

Public reporting burden for this collection of information is estimated to average 180 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0044), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

## General Instructions

This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the latter case, Sections A, B, C, and D should provide the budget for the first budget period (usually a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

### Section A. Budget Summary Lines 1-4 Columns (a) and (b)

For applications pertaining to a *single* Federal grant program (Federal Domestic Assistance Catalog number) and *not* requiring a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a *single* program *requiring* budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to multiple programs where none of the programs require a breakdown by function or activity, enter the catalog program title on each line in Column (a) and the respective catalog number on each line in Column (b).

For applications pertaining to a *multiple* programs where one or more programs *require* a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

### Lines 1-4, Columns (c) through (g)

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in Columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should not equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

## Section B. Budget Categories

In the column headings (1) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets are prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

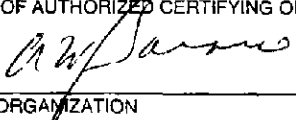
Lines 6a-i—Show the totals of Lines 6a and 6h in each column.

Line 6j—Show the amount of indirect cost.

Line 6k—Enter the total of amounts on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5.

Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (Identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		TITLE CEA I	
APPLICANT ORGANIZATION California Department of Fish and Game		DATE SUBMITTED April 16, 1999	

Standard Form 424B (Rev. 7-97) Back

DEPARTMENT OF FISH AND GAME  
Central Valley Bay-Delta Branch  
4001 North Wilson Way  
Stockton, California 95205-2486



April 8, 1999

Solano County Board of Supervisors  
580 Texas Street  
Fairfield, California 94533

Attention: Mr. Michael D. Johnson, County Administrator

Dear Mr. Johnson:

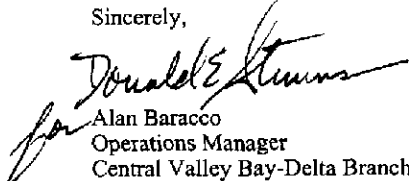
This letter is to notify the Board of Supervisors that the Fish Facilities Research Unit of the California Department of Fish and Game and the Suisun Resource Conservation District (SRCD) will submit a proposal for conducting a fish entrainment study in Suisun Marsh and its water channels. The proposal title is "Biological Evaluation of Suisun Marsh Diversions" and it will be submitted to the CALFED Bay-Delta Program for funding. It will involve fish collections from unscreened water diversions in Suisun Marsh and will help determine the benefits of screening diversions. Questions concerning this proposal should be directed to either:

Mr. Bob Fujimura, Associate Biologist  
California Department of Fish and Game  
4001 N. Wilson Way  
Stockton, California 95205  
(209) 948-7097  
bfujimur@delta.dfg.ca.gov

or

Mr. Steven Chappell, Director  
Suisun Resource Conservation District  
2544 Grizzly Island Road  
Suisun, California 94585  
(707) 425-9302  
srcd@castles.com

Sincerely,

  
Alan Baracco  
Operations Manager  
Central Valley Bay-Delta Branch

cc: Bob Fujimura  
Dan Odenweller  
Steven Chappell

AD99d009.wpd.spw

DEPARTMENT OF FISH AND GAME  
Central Valley Bay-Delta Branch  
4001 North Wilson Way  
Stockton, California 95205-2486



April 8, 1999

Ms. Birgitta Corsello, Director  
Solano County Department of Environmental Management  
601 Texas Street  
Fairfield, California 94533

Dear Ms. Corsello:

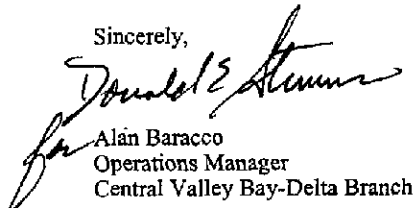
This letter is to notify your Department that the Fish Facilities Research Unit of the California Department of Fish and Game and the Suisun Resource Conservation District (SRCD) will submit a proposal for conducting a fish entrainment study in Suisun Marsh and its water channels. The proposal title is "Biological Evaluation of Suisun Marsh Diversions" and it will be submitted to the CALFED Bay-Delta Program for funding. It will involve fish collections from unscreened water diversions in Suisun Marsh and will help determine the benefits of screening these diversions. Questions concerning this proposal should be directed to either:

Mr. Bob Fujimura, Associate Biologist  
California Department of Fish and Game  
4001 N. Wilson Way  
Stockton, California 95205  
(209) 948-7097  
bfujimur@delta.dfg.ca.gov

or

Mr. Steven Chappell, Director  
Suisun Resource Conservation District  
2544 Grizzly Island Road  
Suisun, California 94585  
(707) 425-9302  
srcd@castles.com

Sincerely,



Alan Baracco  
Operations Manager  
Central Valley Bay-Delta Branch

cc: Bob Fujimura  
Dan Odenweller  
Steven Chappell

AB99d008.wpd.spw